

## Sample Submission Form Instructions

*Please note that if form is not filled out completely and according to instructions, the samples and submission form will be returned until all is complete and correct.*

### 1. Name and Contact Information:

- a. Please fill out with the **Principal** Investigators name, along with the submitting persons contact information.
- b. Include the entire Proposal Title and the number assigned it in your acceptance letter.
- c. List anything else that may be pertinent to your individual project.

### 2. Requirements for Submission:

- a. Minimum concentrations of RNA are listed because we are limited on reaction volume. Small deviations from these are acceptable, though please ask us before submitting samples under the required concentrations.
- b. Minimum amounts of RNA are listed because we run 4 microarray chips per experiment. As given in the example, on page 2, if an RNA sample will be compared to more than one other sample, please include the minimum amount times the number of comparisons.
- c. Agilent Bioanalyzer samples are requested to check the RNA integrity before running the microarray experiments. These results, in combination with gel images, are used to determine if the samples are up to microarray specifications for pure, non-degraded RNA.
- d. An **original** gel image of the total RNA should also accompany your microarray and bioanalyzer samples. It is very hard to learn things from photocopied gels.
- e. Because of the number of samples received and the current way of storing them, screw-cap tubes are a necessity. Please be sure that these are labeled appropriately with sample name and investigator name, if you plan to use stickers, please make sure that they are appropriate for the tube and will not fall off.
- f. As stated above, if all these requirements are not met, the samples will be returned.

### 3. RNA Information Table

- a. Please assign RNA names so that they give the Microarray Personnel an idea of what the sample contains. Please do not number 1, 2, 3, etc.
- b. RNA type will be either cell culture line or type of tissue the RNA was isolated from.
- c. RNA species, either total or poly A.
- d. Please specify the exact prep date (MM/DD/YYYY). This yet another way for us to reference the sample.
- e. Let us know what RNA extraction method you used.
- f. Please also provide the OD 260/280 ratio for our reference, and check below that a bioanalyzer dilution has been made for the sample.

### 4. RNA Samples Submitted for Microarray Analysis and Experiment Information

- a. An example is given on how the Sample table should be filled out.
- b. Again, be sure here that enough RNA is provided for all comparisons needed.
- c. For the experiment information, please let us know what treatment is given, in what dosage, for how long. If your experiment is not necessarily a "treatment" (i.e. either knockout mouse or cell line), please try to give us information about the subject.

### Sample Submission Form

*This form must be included with all samples submitted to the NIEHS Microarray Center.*

Investigator Name & Institute:

Phone Number:

Email Address:

Project (proposal) Title and Number:

List genes of interest for this experiment:

Please describe other biological parameters of special note for your samples i.e. cell survival data, cell proliferation or toxicity data, cell cycle stage, etc. (attach a separate sheet if necessary):

#### Sample Submission Requirements

(samples will be returned if all criteria are not met):

*Please check boxes when criteria are met.*

- a. RNA concentration of a minimum: 1 ug/ul for total RNA in nuclease-free water.
- ☐ b. Minimum submission of 100 ug total RNA per comparison (i.e. if a sample, such as a control, is to be compared to more than one other sample, there must be 100 ug total RNA per comparison). Reserve sufficient quantity for signal validation by traditional methods, e.g. northern blot.
- ☐ c. OD 260/280 absorbance ratio of 1.7-2.1, quantitated **using NMC RNA quantitation protocol**. Please see website for current protocols: <http://dir.niehs.nih.gov/microarray/>
- ☐ d. A 5 uL sample at 100ng/ul of each RNA sample submitted for RNA quality check on Agilent Bioanalyzer.
- ☐ e. Submission must be accompanied by **original** gel image (clearly labeled and easily distinguishable) with 1-5 ug/lane of each total RNA species. If submitting mRNA, the gel need only be of the total RNA before poly A selection. Greater than 50% of EtBr stained material must be 28S and 18S bands.
- ☐ f. Screw-cap tubes (with O-ring) neatly labeled with sample name, date, and RNA concentration.
- ☐ g. Tubes shipped inside 50 mL conical tubes on dry ice if being shipped from an off-site location.
- ☐ h. Completion of **ALL** tables in this form.

RNA INFORMATION				
Tube #	RNA Name	RNA Type (tissue, cell line)	Prep Date	Prep Procedure (MA, Trizol, etc.)
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Tube#	1	2	3	4	5	6	7	8	9	10
OD 260/280										
5ul of 100ng/ul (✓)										

RNA Samples Submitted for Microarray Analysis:					
Tube #	TUBE LABEL RNA NAME, DATE, CONC.	TOTAL CONC. (ug/ul)	TOTAL VOL (ul)	TOTAL AMT (ug)	COMPARE WITH:
<b>I</b>	<i>MCF7 Control</i>	<i>1</i>	<i>100</i>	<b>200</b>	
<b>II</b>	<i>MCF7 E2</i>	<i>1</i>	<i>100</i>	<i>100</i>	<i>MCF7 Control</i>
<b>III</b>	<i>MCF7 E1</i>	<i>1</i>	<i>100</i>	<i>100</i>	<i>MCF7 Control</i>
<b>1</b>					
<b>2</b>					
<b>3</b>					
<b>4</b>					
<b>5</b>					
<b>6</b>					
<b>7</b>					
<b>8</b>					
<b>9</b>					
<b>10</b>					

EXPERIMENT INFORMATION					
Tube #	Agent Type	Agent	CAS#	Dosage	Time Point
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Select the appropriate chip(s) for your samples to be hybridized to:					
ToxChip	Human Oligo	Mouse Oligo	Mouse Chip	Yeast Chip	Rat Chip

**\*Please provide unambiguous names for RNA (no 3-letter codes). If we find that the annotations given to separate samples are confusing, we will return this form for further clarification.**

**Send frozen RNA on dry ice via overnight delivery Monday thru Thursday (please avoid conflicts with weekends and federal holidays).**

**Ship to:**

**Mrs. Sherry Grissom  
NIEHS  
111 Alexander Dr., Room D228  
Research Triangle Park, NC 27709  
(919) 541-0747**